

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A wireless LAN system comprising:

| at least one base station;

| at least one wireless LAN terminal connected to said base station via a wireless LAN;

and

a packet transmission system for transmitting a packet between said base station and said at least one wireless LAN terminal via the wireless LAN, said packet transmission system comprising:

sorting means for sorting received packets into prioritized packets and non-prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

| capsulating means for capsulating at least one of the packets accumulated in said accumulating means into at least one capsulated packet; and

| transmitting means for transmitting ~~the~~ said capsulated packet capsulated by said capsulating means.

Claim 2 (currently amended): The wireless LAN system according to claim 1,
wherein said packet transmission system further comprises arbitrating means for
transmitting delay request information for delaying transmission of packets from said base
station ~~equipment~~ to said wireless LAN terminal such that the packet transmission does not
overlap with other terminals, thereby arbitrating transmission of packets from said wireless LAN
terminal to said base station ~~equipment~~ so as not to cause a collision thereof.

Claim 3 (currently amended): The wireless LAN system according to claim 1,
wherein said wireless LAN terminal is associated with a PCF mode, and said base station
sets a NAV time and gives timing provided to transmit a said encapsulated packet, to said wireless
LAN terminal.

Claim 4 (currently amended): The wireless LAN system according to claim 1,
wherein said packet transmission system further comprises means for adjusting a period
for transmitting a said encapsulated packet according to ~~the~~ a number of real time sessions active
via said base station.

Claim 5 (currently amended): The wireless LAN system according to claim 1,

wherein said packet transmission system further comprises means for collecting CODEC minimal periods corresponding to ~~the number~~all of said wireless LAN terminals connected to each of ~~set every~~ said base stations and ~~adjusting the longest CODEC period of the resultant minimal periods~~setting as a transmission period of each capsulated packet the longest of said CODEC minimal periods of all of said wireless terminals connected to each respective base station as a transmission period of each capsulated packet for said respective base station.

Claim 6 (currently amended): The wireless LAN system according to claim 1, further comprising:

an IP exchanger having said packet transmission system;

a table in which IP addresses of the wireless LAN terminal connected to every said base station and information indicative of whether said at least one wireless LAN terminal is able to receive capsulated packets are registered; and

means for performing control for allowing said IP exchanger to capsule prioritized packets based on the information registered in said table and causing said IP exchanger to transmit ~~the said~~ capsulated packet, if transmission destination IP addresses of received packets respectively correspond to IP addresses of said wireless LAN terminal and said wireless LAN terminal is able to receive said capsulated packets, and allowing said IP exchanger to transmit the received packets to said base station as they are if not so without encapsulation if said wireless LAN terminal is not able to receive said capsulated packets.

Claim 7 (currently amended): The wireless LAN system according to claim 1,

wherein said packet transmission system further comprises:

arithmetic means for computing use efficiency of a general queue for accumulating the non-prioritized packets, using a predetermined arithmetic expression; and

control means for changing coefficients of the arithmetic expression according to ~~the~~ a state of accumulation of the general queue, thereby controlling ~~the~~ a value of the use efficiency computed by said arithmetic means.

Claim 8 (original): The wireless LAN system according to claim 7,

wherein said predetermined arithmetic expression is represented as follows:

$$RTT = (\alpha \times K \times 01d_RTT) + ((1 - \alpha) \times \text{New_Round_Time_Sample})$$

$$0 \leq \alpha < 1, 0 < K \leq 1$$

where 01d_RTT indicates an RTT value up to date, New_Round_Time_Sample indicates the time from the transmission of the latest TCP packet to the reception of an ACK, and K and α indicate coefficients, and

said control means changes the value of the coefficient K according to the state of accumulation of the general queue.

Claims 9-17 (canceled).

Claim 18 (previously presented): A packet transmission system comprising:

sorting means for sorting received packets into prioritized packets and non-prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating the packets accumulated in said accumulating means; and

transmitting means for transmitting the packet capsulated by said capsulating means, wherein said transmitting means transmits the capsulated packet in matching with a CODEC period, the transmitting means transmitting the capsulated packet in a period T that satisfies $d \leq T \leq C$ where the CODEC period is C and the minimum period necessary for terminal reception is d .

Claims 19-25 (canceled).

Claim 26 (new): A base station including a packet transmission system which comprises:

sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one capsulated packet; and

transmitting means for transmitting said capsulated packet capsulated by said capsulating means.

Claim 27 (new): A wireless LAN terminal including a packet transmission system which comprises:

sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one capsulated packet; and

transmitting means for transmitting said capsulated packet capsulated by said capsulating means.

Claim 28 (new): The wireless LAN terminal according to claim 27, wherein said sorting means further sorts the prioritized packets into moving pictures and voice packets.

Claim 29 (new): The wireless LAN terminal according to claim 27, wherein only when the received packets are UDP and IP ports coincide with IP ports registered in advance respectively, said sorting means sorts the received packets into the prioritized packets.

Claim 30 (new): The wireless LAN terminal according to claim 27, wherein said sorting means sets queues to general packets other than the prioritized packets every MAC addresses.

Claim 31 (new): The wireless LAN terminal according to claim 27, wherein said transmitting means transmits prioritized capsulated packets with general packets being respectively interrupted between the prioritized capsulated packets.

Claim 32 (new): A packet transmission system comprising:
sorting means for sorting received packets into prioritized packets and packets other than the prioritized packets;
accumulating means for accumulating the prioritized packets sorted by said sorting means;
capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one capsulated packet; and
transmitting means for transmitting said capsulated packet capsulated by said capsulating means.

Claim 33 (new): The packet transmission system according to claim 33, wherein said transmitting means transmits said capsulated packet in matching with a CODEC period.

Claim 34 (new): The packet transmission system according to claim 33, wherein said sorting means further sorts the prioritized packets into moving picture packets and voice packets, and said capsulating means capsulates the prioritized packets every moving picture and voice packets.

Claim 35 (new): The packet transmission system according to claim 33, wherein only when the received packets are UDP and IP ports coincide with IP ports registered in advance respectively, said sorting means sorts the received packets into the prioritized packets.

Claim 36 (new): The packet transmission system according to claim 33, wherein said sorting means sets queues to general packets other than the prioritized packets every MAC addresses.

Claim 37 (new): The packet transmission system according to claim 33, wherein a capsulated packet transmission period of said transmitting means is counted by an interval timer.

Claim 38 (new): The packet transmission system according to claim 33, wherein said transmitting means transmits prioritized capsulated packets with general packets being respectively interrupted between the prioritized capsulated packets.

Claim 39 (new): A packet transmission method comprising the steps of:
 sorting received packets into prioritized packets and packets other than the prioritized packets;
 accumulating the sorted prioritized packets;
 capsulating more than one of the accumulated packets into one capsulated packet;
and
 transmitting said capsulated packet.

Claim 40 (new): A wireless LAN system comprising:

at least one base station;

at least one wireless LAN terminal connected to said base station via a wireless LAN;

and

a packet transmission system for transmitting a packet between said base station and said at least one wireless LAN terminal via the wireless LAN, said packet transmission system comprising:

sorting means for sorting received packets into prioritized packets and non-prioritized packets;

accumulating means for accumulating the prioritized packets sorted by said sorting means;

capsulating means for capsulating more than one of the packets accumulated in said accumulating means into one capsulated packet; and

transmitting means for transmitting said capsulated packet capsulated by said capsulating means.